



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/619,025	07/19/2000	Garnet R. Chaney	03760.P001X	2227

8791 7590 06/21/2004

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD, SEVENTH FLOOR
LOS ANGELES, CA 90025

EXAMINER

NOLAN, DANIEL A

ART UNIT PAPER NUMBER

2654

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

4

Office Action Summary

Application No.

09/619,025

Applicant(s)

CHANEY ET AL.

Examiner

Daniel A. Nolan

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because 222 (in figure 2) is not labeled "Yes/No".

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

- 211 (in figure 2) is not specified.
- 617 (in figure 6) is not specified.

Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification, such as the word "processed", misspelled in line 19 (page 6).
4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Method And Apparatus For Generating A Language Independent Document Abstract".

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Withgott et al

6. Claims 13 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Withgott et al (U.S. Patent 5,384,703 A).

7. Regarding claims 13 and 30, Withgott et al, with the invention *for summarizing documents according to theme*, reads on every feature of the claims for *identifying a significant phrase in a document* as follows:

- Withgott et al teaches the features of *reading a sequence of words from the document* (S20 in figure 2).
- Withgott et al teaches the features of *determining a score for each word in the sequence based on the length of each word* (S30 in figure 2 – see column 6 lines 21-24);
- Withgott et al teaches the features of *comparing the score for each word in the sequence against a threshold score* (column 6 lines 25-26 – see lines 39-41);
- Withgott et al teaches the features of *indicating that the sequence of words is a significant phrase* (i.e., *complex*, column 3 lines 42-44) *if the number of words in the*

sequence that have the score greater than the threshold score equals or exceeds a predetermined number (column 6 lines 39-43);

- *Withgott et al* teaches the features of *storing the sequence of words and the number of words in the sequence (S70 in figure 2), if the sequence of words is a significant phrase (S60 in figure 2).*

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Withgott et al & Zamora^{'763}

10. Claims 1, 10-12, 14-18, 27-29 & 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Withgott et al in view of Zamora^{'763} (U.S. Patent 4,965,763 A).

11. Regarding claims 1 and 18, Withgott et al reads on the features of the claims for *identifying a significant phrase in a document* as follows:

- Withgott et al teaches the features of *reading a sequence of words from the document* (S20 in figure 2).
- Withgott et al teaches the features of *determining a score for each word in the sequence based on the length of each word* (S30 in figure 2 – see column 6 lines 21-24);
- Withgott et al teaches the features of *comparing the score for each word in the sequence against a threshold score* (column 6 lines 25-26 – see lines 39-41);
- Withgott et al teaches the features of *indicating that the sequence of words is a significant phrase* (i.e., *complex*, column 3 lines 42-44) *if the number of words in the sequence that have the score greater than the threshold score equals or exceeds a predetermined number* (column 6 lines 39-43);
- Withgott et al teaches the features of *retrieving a sentence from the document, the sentence containing the sequence of words [that] is a significant phrase* (column 6 lines 43-46);

Where Withgott et al does not speak to the details of *searching an abstract of the document to determine whether the sentence is included in the abstract* but the well-

Art Unit: 2654

known process of eliminating duplicate text reflected by the disclosure that "*This summary could be formed by extracting the selected regions from the document, or by other means*" (column 4 line 68 to column 5 line 2) is expressly taught by Zamora^{'763}, with the invention *for automatic extraction of commonly specified information from business correspondence* (column 33 lines 40-42).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of eliminating duplicate entries to the device/method of Withgott et al to keep the summary as concise as possible.

12. Regarding claims 14 and 31; the claims are set forth with the same limits as claims 13 and 30, respectively. Withgott et al does not speak to the details of *searching an abstract of the document to determine whether the sentence is included in the abstract* but the well-known process of eliminating duplicate text reflected by the disclosure that "*This summary could be formed by extracting the selected regions from the document, or by other means*" (column 4 line 68 to column 5 line 2) is expressly taught by Zamora^{'763}, with the invention *for automatic extraction of commonly specified information from business correspondence* (column 33 lines 40-42).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of eliminating duplicate entries to the device/method of Withgott et al to keep the summary as concise as possible.

13. Regarding claims 10, 27, 15 & 32; the claims are set forth with the same limits as claims 1, 18, 14 & 31, respectively. Withgott et al teaches the feature of *including the sentence in the abstract* (S70 in figure 2) but does not specifically address the well-known precaution of avoiding duplicates. Zamora^{'763} teaches this further limitation of being applied *if the sentence is not included in the abstract* (column 33 lines 40-42). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Zamora^{'763} to the device/method of Withgott et al to address the well-known problem of *duplications*.

14. Regarding claims 11, 16, 28 & 33; the claims are set forth with the same limits as claims 1, 18, 14 & 31, respectively. Withgott et al does not specifically address the well-known precaution of avoiding duplicates. Zamora^{'763} teaches the feature of *discarding the sentence if the sentence is included in the abstract* (column 33 lines 40-42). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Zamora^{'763} to the device/method of Withgott et al to avoid duplication.

15. Regarding claims 12, 17, 29 & 34; the claims are set forth with the same limits as claims 1, 14, 18 & 31, respectively. Withgott et al reads on the feature where *the abstract is language independent* (column 3 lines 40-54 & column 5 line 62 to column 6 line 16).

Withgott et al, Zamora^{'763} & Chou et al

16. Claims 2 and 19 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Withgott et al in view of Zamora^{'763} and further in view of Chou et al (U.S. Patent 6,505,151 B1).

17. Regarding claims 2 and 19; the claims are set forth with the same limits as claims 1 and 18, respectively. Withgott et al & Zamora^{'763} are silent as to *phrase delimiters*. Chou et al, with the invention for *dividing sentences into phrases using entropy calculations of word combinations based on adjacent words*, reads on the feature of *reading the sequence of words in the document until a phrase delimiter is detected* (12 in figure 1 – see column 6 lines 54-63). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Chou et al to the device/method of Withgott et al & Zamora^{'763} to logically constrain the set of words being processed.

Withgott et al, Zamora^{'763} & Sakurai et al

18. Claims 3 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Withgott et al in view of Zamora^{'763} and further in view of Sakurai et al (Japan Patent 04-362699 A).

Art Unit: 2654

19. Regarding claims 3 and 20; the claims are set forth with the same limits as claims 1 and 18, respectively. Withgott et al & Zamora^{'763} are silent as to *proportional scoring*. Sakurai et al, with the invention for *voice recognition* teaches the feature where *the score for the word is proportional to the number of characters in the word* (in the Constitution of the 1st page, lines 5-6). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Sakurai et al to the device/method of Withgott et al & Zamora^{'763} so as to increase recognition as words become longer.

Withgott et al, Zamora^{'763}, Sakurai et al & Nunberg et al

20. Claims 4 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Withgott et al in view of Zamora^{'763} and further in view of Sakurai et al and further in view of Nunberg et al (U.S. Patent Publication 2002/0002450 A1).

21. Regarding claims 4 and 21; the claims are set forth with the same limitations as claims 3 and 20, respectively. Neither Withgott et al nor Zamora^{'763} nor Sakurai et al speak to *including numerics*. Nunberg et al, with the invention for *automatically filtering information retrieval results using text genre*, reads on the feature where *the number of characters in the word includes the number of numeric digits in the word* (§[0064]). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Withgott et al or Zamora^{'763} or Sakurai et al to the device/method of Nunberg et al so that the reduction

Art Unit: 2654

of contracting or abbreviating will not reduce the significance of contribution to the phrase.

Withgott et al, Zamora^{'763} & Nunberg et al

22. Claims 5-6 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Withgott et al in view of Zamora^{'763} and further in view of Nunberg et al.

23. Regarding claims 5 and 22; the claims are set forth with the same limitations as claims 1 and 18, respectively. Neither Withgott et al nor Zamora^{'763} speak to *including numerics*. Nunberg et al, with the invention for *automatically filtering*, reads on the feature where *the score for the word is increased for each capitalized letter in the word* (¶[0049]). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Withgott et al or Zamora^{'763} or Sakurai et al to the device/method of Nunberg et al so that proper nouns and acronyms will be recognized as contributing significance to the phrase.

24. Regarding claims 6 and 23; the claims are set forth with the same limitations as claims 1 and 18, respectively. Neither Withgott et al nor Zamora^{'763} disclose *scoring by numerics and capitalizations*. Nunberg et al teaches the feature where *the score for the word is the length of the word plus the number of capitalized letters in the word* (¶[0049] lines 6-13). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Nunberg

et al to the device/method of Withgott et al or Zamora^{'763} so that abbreviations and acronyms will be recognized as contributing significance to the phrase.

Withgott et al, Zamora^{'763} & Zamora^{'039}

25. Claims 7 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Withgott et al in view of Zamora^{'763} and further in view of Zamora^{'039} (U.S. Patent 4,773,039 A).

26. Regarding claims 7 and 24; the claims are set forth with the same limitations as claims 1 and 18, respectively. Neither Withgott et al nor Zamora^{'763} speak to a *table*. Zamora^{'039}, with the invention *for compaction and replacement of phrases*, teaches the features of *determining whether the word exists in a predetermined table* (66 in figure 3) and *retrieving the score for the word from the predetermined table* (72 in figure 3). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Zamora^{'039} to the device/method of Withgott et al or Zamora^{'763} to save typing with the ability to make replacements using previously encountered phrases.

Withgott et al, Zamora^{'763} & Richardson et al

27. Claims 8-9 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Withgott et al in view of Zamora^{'763} and further in view of Richardson et al (U.S. Patent 5,926,784 A).

28. Regarding claims 8 and 25; the claims are set forth with the same limitations as claims 1 and 18, respectively. Neither Withgott et al nor Zamora^{'763} speak to *averaging*. Richardson et al, with the invention *for natural language parsing using "podding" (Probability of "Discreteness")*, reads on the feature where *the threshold score is based on an average of the scores of words in the sequence of words* (column 6 line 57 to column 8 line 33 – see column 7 lines 61-63). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Richardson et al to the device/method of Withgott et al or Zamora^{'763} so as to include length as a factor of significance (probability).

29. Regarding claims 9 and 26; the claims are set forth with the same limitations as claims 8 and 25, respectively. Neither Withgott et al nor Zamora^{'763} speak to *adjusted averaging*. Richardson et al teaches the feature where *the threshold score is adjusted by a predetermined value to be different from the average of the scores of words in the sequence of words* (the *weighted average* of column 7 line 62). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Richardson et al to the device/method of Withgott et al or Zamora^{'763} so as to be certain that any factor for consideration is not overwhelmed by the size of the score.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Zamora^{'039} (U.S. Patent 4,773,039 A) Information processing system for compaction and replacement of phrases.
- Hejna Jr. (U.S. Patent Publication 2003/0046080 A1) to determine and use audience affinity and aptitude.
- Brems et al (U.S. Patent 5,566,272 A) automatic speech recognition using confidence measures.
- Doddington (U.S. Patent 5,345,535 A) speech analysis.
- Ulicny et al (U.S. Patent 6,490,549 B1) automatic orthographic transformation of a text stream.
- Chou et al (U.S. Patent 6,505,151 B1) for dividing sentences into phrases using entropy calculations of word combinations based on adjacent words.
- Baker et al (U.S. Patent 5,210,689 A) for automatically selecting among a plurality of input modes.
- Razin et al (U.S. Patent 6,098,034 A) for standardizing phrasing in a document, eliminating duplications.
- Pirz et al (U.S. Patent 4,454,586 A) for generating speech pattern templates.
- Chen et al^{'191} (U.S. Patent 5,848,191 A) generating thematic summaries from a document image without performing character recognition.

- Su et al (U.S. Patent 5,418,717 A) multiple score language processing system.
- O'Donoghue (U.S. Patent 5,867,811 A) using a bilingual database including aligned corpora.
- Yamron et al (U.S. Patent 6,052,657 A) text segmentation and identification of topic using language models.
- Inoue (Japan Patent 64-040900) effectively utilizing method of memory in sound recording and reproducing system by checking the content of a recorded phrase and using it as a new phrase.
- Pedersen et al⁶⁹⁶ (Japan Patent 06-348696) automatic identification method to provide an automatic identification method which ranks the document sentences to produce abstracts through detection of the words and/or phrases that show emphases.
- Pedersen et al⁵⁴³ (U.S. Patent 5,638,543 A) for automatic document summarization, counting 2- or 3-letter words as being significant.
- Koyama et al (Japan Patent 2001-101223) document summarizing from document scores imparted to partial tree and the summary is synthesized.

30. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Daniel A. Nolan at telephone (703) 305-1368 whose normal business hours are Mon, Tue, Thu & Fri, from 7 AM to 5 PM.

If attempts to contact the examiner by telephone are unsuccessful, supervisor Richemond Dorvil can be reached at (703)305-9645.

Art Unit: 2654

The fax phone number for Technology Center 2600 is (703)872-9314. Label informal and draft communications as "DRAFT" or "PROPOSED", & designate formal communications as "EXPEDITED PROCEDURE". Formal response to this action may be faxed according to the above instructions,

or mailed to:

P.O. Box 1450
Alexandria, VA 22313-1450

or hand-deliver to: Crystal Park 2,
2121 Crystal Drive, Arlington, VA,
Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 Customer Service Office at telephone number (703) 306-0377.

Daniel A. Nolan
Examiner
Art Unit 2654

DAN/d
June 11, 2004


RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER